

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-2. (Cancelled.)

3. (Currently Amended) A network system for a network having plural nodes connected, wherein a node belonging to said network comprises:

a CPU (Central Processing Unit) executing a learning frame management unit which refers to a source media access control address (MAC SA) table cache to determine whether a learning frame transmission request of a MAC SA has been made[[,]] ; and

a memory system that stores:

a MAC forwarding table memory which stores an output port for a destination MAC address and [[tag]] destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame MAC address assigned by the learning frame management unit; ; and

the MAC SA table cache which stores the source MAC address which has made a learning frame transmission request.

4. (Previously Presented) The network system as set forth in claim 3, wherein said nodes comprise:

an aging request acceptance unit which ages said MAC SA table cache, and

a transmission request unit which makes a learning frame transmission request to a CPU.

5. (Previously Presented) The network system as set forth in claim 4, wherein said nodes have a learning management computer-readable medium encoded with a computer program which conducts a learning frame process.

6. (Withdrawn – Previously Presented) A network system for a network having plural nodes connected, wherein a node belonging to said network comprises:

a learning management computer-readable medium encoded with a computer program which conducts a learning frame process; and

a software table,
wherein a network control computer-readable medium encoded with a computer program uses a set of memory duplicate information to perform an entry search in the software table.

7. (Previously Presented) The network system as set forth in claim 3, wherein said node has an equipment control computer-readable medium encoded with a computer program which conducts a variety of configurations.
8. (Previously Presented) The network system as set forth in claim 3, wherein said node comprises a frame type judgment unit which judges an input frame.
9. (Previously Presented) The network system as set forth in claim 3, wherein a node belonging to said network comprises:
 - an aging control unit which ages an entry to be aged, and
 - an aging management table which stores an entry to be aged.
10. (Cancelled.)
11. (Previously Presented) The network system as set forth in claim 3, wherein said node comprises a broadcast table memory which stores an output destination port at a time of broadcasting to a tag.
12. (Previously Presented) The network system as set forth in claim 3, wherein said node comprises a tag forwarding table memory which stores an output port for a forwarding tag.
13. (Previously Presented) The network system as set forth in claim 3, wherein said node comprises:
 - a table;
 - an aging circuit; and
 - a forwarding table having a table read/write circuit.

14. (Previously Presented) The network system as set forth in claim 3, wherein said node comprises a TAG address management table which stores an address of a forwarding tag on a MAC forwarding table memory.

15. (Withdrawn – Previously Presented) A network system for a network having plural nodes connected, wherein a node belonging to said network applies a learning function of Ethernet to an asymmetric flow by sending a learning frame through an opposite path to a path where a main signal frame flows.

16-17. (Cancelled.)

18. (Currently Amended) A learning bridge node of a network having plural nodes connected, comprising:

a CPU (Central Processing Unit) executing a learning frame management unit which refers to a source media access control address (MAC SA) table cache to determine whether a learning frame transmission request of a MAC SA has been made[[,]]; and

a memory system that stores:

a MAC forwarding table memory which stores an output port for a destination MAC address and [[tag]] destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame MAC address assigned by the learning frame management unit; and

the MAC SA table cache which stores the source MAC address which has made a learning frame transmission request.

19. (Original) The learning bridge node as set forth in claim 18, comprising:
an aging request acceptance unit which ages a MAC SA table cache, and
a transmission request unit which makes a learning frame transmission request to a CPU.

20. (Previously Presented) The learning bridge node as set forth in claim 19, comprising a learning management computer-readable medium encoded with a computer program which performs learning frame processing.

21. (Withdrawn – Previously Presented) A learning bridge node for a network having plural nodes connected, comprising:
- a learning management computer-readable medium encoded with a computer program which performs learning frame processing; and
 - a software table,
- wherein a network control computer-readable medium encoded with a computer program uses a set of memory duplicate information to perform an entry search in the software table.
22. (Previously Presented) The learning bridge node as set forth in claim 18, comprising an equipment control computer-readable medium encoded with a computer program which makes a variety of configurations.
23. (Original) The learning bridge node as set forth in claim 18, comprising a frame type judgment unit which judges an input frame.
24. (Original) The learning bridge node as set forth in claim 18, comprising:
- an aging control unit which ages an entry to be aged, and
 - an aging management table which stores an entry to be aged.
25. (Cancelled.)
26. (Previously Presented) The learning bridge node as set forth in claim 18, comprising a broadcast table memory which stores an output destination port at a time of broadcasting to a tag.
27. (Original) The learning bridge node as set forth in claim 18, comprising a tag forwarding table memory which stores an output port for a forwarding tag.
28. (Previously Presented) The learning bridge node as set forth in claim 18, comprising:
- a forwarding table having a table;

an aging circuit; and
a table read/write circuit.

29. (Original) The learning bridge node as set forth in claim 18, comprising a TAG address management table which stores an address of a forwarding tag on a MAC forwarding table memory.

30. (Withdrawn – Previously Presented) A learning bridge node for a network having plural nodes connected, wherein a learning function of Ethernet is applied to an asymmetric flow by sending a learning frame through an opposite path to a path where a main signal frame flows.

31-32. (Cancelled.)

33. (Currently Amended) A learning method of a network having plural nodes connected, wherein a node belonging to said network uses a CPU (Central Processing Unit) to:

refers refer to a source media access control address (MAC SA) table cache to judge whether a learning frame transmission request of a MAC SA has been made, and

stores store the MAC SA which has made a learning frame transmission request in said MAC SA table cache, and

stores store an output port for a destination MAC address and a [[tag]] destination tag information corresponding to a virtual local area network (VLAN) tagged Ethernet frame in a MAC forwarding table memory.

34. (Original) The learning method as set forth in claim 33, wherein said node performs aging of said MAC SA table cache and makes a learning frame transmission request to a CPU.

35. (Previously Presented) The learning method as set forth in claim 34, wherein said node is provided with a learning management computer-readable medium encoded with a computer program which performs learning frame processing.

36. (Withdrawn – Previously Presented) A learning method for a network having plural nodes connected, wherein a node belonging to said network comprises:

a learning management computer-readable medium encoded with a computer program which performs learning frame processing; and
a software table,

wherein a network control computer-readable medium encoded with a computer program uses a set of memory duplicate information to perform an entry search in the software table.

37. (Previously Presented) The learning method as set forth in claim 33, wherein said node comprises an equipment control computer-readable medium encoded with a computer program which makes a variety of configuration.

38. (Original) The learning method as set forth in claim 33, wherein said node discriminates an input frame.

39. (Original) The learning method as set forth in claim 33, wherein a node belonging to said network performs aging of an entry to be aged and stores an entry to be aged in an aging management table.

40. (Cancelled.)

41. (Previously Presented) The learning method as set forth in claim 33, wherein said node stores an output destination port at a time of broadcasting to a tag in a broadcast table memory.

42. (Original) The learning method as set forth in claim 33, wherein said node stores an output port for a forwarding tag in a tag forwarding table memory.

43. (Previously Presented) The learning method as set forth in claim 33, wherein said node comprises a forwarding table having a table;

an aging circuit; and
a table read/write circuit.

44. (Original) The learning method as set forth in claim 33, wherein said node stores an address of a forwarding tag on a MAC forwarding table memory in a TAG address management table.

45. (Withdrawn – Previously Presented) A learning method for a network having plural nodes connected, wherein a node belonging to said network applies a learning function of Ethernet to an asymmetric flow by sending a learning frame through an opposite path to a path where a main signal frame flows.